UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | |
|--|-------------|----------------------|--------------------------|------------------|--|
| 10/591,833 | 07/16/2007 | Markus Wimmer | 2579.022US1 | 3319 | |
| 21186 7590 02/07/2011 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 | | | EXAMINER | | |
| | | | BECKHARDT, LYNDSEY MARIE | | |
| MINNEAPOLIS, MN 55402 | | | ART UNIT | PAPER NUMBER | |
| | | | 1613 | | |
| | | | | | |
| | | | NOTIFICATION DATE | DELIVERY MODE | |
| | | | 02/07/2011 | ELECTRONIC | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@slwip.com request@slwip.com

| | Application No. | Applicant(s) | |
|---|--|---|-------------|
| Office Astion Commons | 10/591,833 | WIMMER ET AL. | |
| Office Action Summary | Examiner | Art Unit | |
| | LYNDSEY BECKHARDT | 1613 | |
| The MAILING DATE of this communication app Period for Reply | pears on the cover sheet with the c | orrespondence ad | idress |
| A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 136(a). In no event, however, may a reply be time will apply and will expire SIX (6) MONTHS from e, cause the application to become ABANDONE | N. hely filed the mailing date of this c (35 U.S.C. § 133). | |
| Status | | | |
| 1) ■ Responsive to communication(s) filed on <u>07 E</u> 2a) ■ This action is FINAL . 2b) ■ This 3) ■ Since this application is in condition for alloware closed in accordance with the practice under E | s action is non-final. nce except for formal matters, pro | | e merits is |
| Disposition of Claims | | | |
| 4) ☐ Claim(s) 9,12,13 and 18-23 is/are pending in the 4a) Of the above claim(s) is/are withdrate 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 9,12,13 and 18-23 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or and/or are subject. | wn from consideration. | | |
| Application Papers | | | |
| 9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) accomposed applicant may not request that any objection to the Replacement drawing sheet(s) including the correct should be something. The oath or declaration is objected to by the Examine 11). | cepted or b) objected to by the E drawing(s) be held in abeyance. See tion is required if the drawing(s) is obj | e 37 CFR 1.85(a). ected to. See 37 C | , , |
| Priority under 35 U.S.C. § 119 | | | |
| 12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority application from the International Burea * See the attached detailed Office action for a list | ts have been received. ts have been received in Applicationity documents have been received u (PCT Rule 17.2(a)). | on No ed in this National | Stage |
| Attachment(s) 1) Notice of References Cited (PTO-892) | 4) 🔲 Interview Summary | (PTO-413) | |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date | Paper No(s)/Mail Da 5) Notice of Informal P 6) Other: | ate | |

DETAILED ACTION

Claims 9, 12-13 and 18-23 are currently pending and under examination.

Claims 9 and 22-23 have been amended. Claims 1-8, 10-11 and 16 are cancelled.

Response to Arguments

Applicant's arguments and amendments, filed 12/07/2010, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Modified Rejections:

The following rejection is modified based on Applicant's claim amendments and cancelled claims.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9 and 12-13 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Grad in view of US 5,702,456 and US 5,891,558

This rejection is maintained for reasons of record in the Office Action mailed 09/07/2010. The rejection has been reworded slightly based upon Applicant's amendments filed 12/07/2010. The teachings of Grad in view of the '456 patent and the '558 patent are discussed in the prior Office action and will not be iterated herein.

Application/Control Number: 10/591,833 Page 3

Art Unit: 1613

Regarding amendments to instant claim 9, claim 9 has been amended to reflect the claim limitations of previously presented claims 10-11 and 16. Applicant is referred to the Office Action dated 09/07/2010, wherein the teachings of the Grad, the '456 patent and the '558 patent as applied to the limitations of previous claims 10-11 and 16, now in instant claim 9, are discussed.

Response to Arguments:

Applicant argues neither Grad, the '456 patent nor the '558 patent disclose all of the elements of independent claim 9. For example the cited references do not disclose, teach or suggest 'bringing said solution in contact with the chondrocytes by moving said solution over the cell carrier body with a laminar flow'. Neither the '558 patent, the '456 patent nor Grad discloses the claim language discussed above.

In response, the '558 patent teaches a solution containing hyaluronic acid brought into contact with a cartilage replacing implant by sliding across one another. The '456 patent teaches a solution comprising lubricin and hyaluronic acid wherein the solution is placed in a bath (column 4, lines 6-16) and wherein sliding is used to create a boundary lubricant layer on the implant (column 8, lines 38-45). Grad teaches surface motion during generation of the scaffold to elicit SZP/lubricin expression, which is known to play a role in joint lubrication. The combination of references teaches surface motion being applied by sliding pressure wherein the solution is present. The definition of laminar flow is non-turbulent streamline flow in parallel layers (Free Dictionary, page 1, bottom). The sliding motion taught by the combination of references reads on flow in

parallel layers, thus teaching laminar flow, absent factual evidence to the contrary. No definition for laminar flow is provided in the instant specification.

Claim 21 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Grad (applicant provided on IDS dated 09/05/2006), US 5,702,456 (patent date: 12/30/1997) and US 5,891,558 (patent date: 04/06/1999) as applied to claims 9-13 and 16 above, and further in view of US 2003/0211992 (publication date: 11/13/2003).

Response to Arguments:

Applicant argues claim 21 depends from instant claim 9 and for at least the foregoing reasons is believed to be allowable over the cited art.

In response, Applicant's arguments regarding instant claim 9 are discussed above. Applicant does not contest the teachings of the combination of Grad, the '456 patent and the '558 patent in view of the '992 publication as applied to the obviousness of the use of Ringers solution as the solvent taught by the combination of the Grad, the '456 patent and the '558 patent.

Claims 18-20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grad (applicant provided on IDS dated 09/05/2006), US 5,702,456 (patent date: 12/30/1997) and US 5,891,558 (patent date: 04/06/1999) as applied to claims 9-13 and 16 above, and further in view of US 5,432,167 (patent

Application/Control Number: 10/591,833 Page 5

Art Unit: 1613

date: 07/11/1995), US 5,171,273 (patent date: 12/15/1992) and Olsen (publication

date: 10/01/2002).

This rejection is maintained for reasons of record in the Office Action mailed 09/07/2010. The rejection has been reworded slightly based upon Applicant's amendments filed 12/07/2010. The teachings of Grad, the '456 patent and the '558 patent in further view of the '167 patent, the '273 patent and Olsen are discussed in the prior Office action and will not be iterated herein.

Regarding amendments to instant claims 22-23, Applicant has amended claims 22-23 to align with interpretation used in the previous office action, thus the rejection is maintained for reasons of record.

Response to Arguments:

Applicant argues claims 18-20 and 22-23 depend from instant claim 9 and for at least the foregoing reasons is believed to be allowable over the cited art.

In response, Applicant's arguments regarding instant claim 9 are discussed above. Applicant does not contest the teachings of the combination of Grad, the '456 patent and the '558 patent in view of the '167 patent, the '273 patent and Olsen as applied to the obviousness of the use of the molecular weight of hyaluronic acid (claim 18), the ratio of lubricin to hyaluronic acid (claims 19-20), and the percent of lubricin and hyaluronic acid (claims 22-23) in the solution taught by the combination of Grad, the '456 patent and the '558 patent.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYNDSEY BECKHARDT whose telephone number is (571)270-7676. The examiner can normally be reached on Monday thru Thursday 7:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Kwon can be reached on (571) 272-0581. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/591,833 Page 7

Art Unit: 1613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LYNDSEY BECKHARDT/ Examiner, Art Unit 1613

/Kevin K. Hill/

Primary Examiner, Art Unit 1633